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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,077	02/18/2005	Werner Zimmermann	056226.55708US	5040

23911 7590 12/11/2006

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EXAMINER

WHITTINGTON, KENNETH

ART UNIT	PAPER NUMBER
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2862

DATE MAILED: 12/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/525,077	<b>Applicant(s)</b> ZIMMERMANN ET AL.	
	<b>Examiner</b> Kenneth J. Whittington	<b>Art Unit</b> 2862	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 8-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 8-11 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/18/05, 6/24/05</u> . | 6) <input type="checkbox"/> Other: _____  |

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**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

- 6           A person shall be entitled to a patent unless -
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

          Claims 1-3 and 8-11 are rejected under 35 U.S.C. 102(b) as  
12   being anticipated by Dundas et al. (US4,692,701), hereinafter  
     Dundas.

          Regarding claims 1 and 8, Dundas discloses a method of  
testing material comprising:

- arranging an exciting/sensing device at least adjacent to  
magnetic or magnetizable elements (See Dundas FIG. 1, item 11);  
18       applying a continuously rising magnetizing current to the  
exciting device (See FIGS. 1 and 2, note rising current 17  
applied to coil 11);

          detecting Barkhausen noise by means of the sensing devices  
(See FIG. 1, item 19);

- determining magnitude of the magnetizing current when the  
24   Barkhausen noise starts (See FIGS. 3-5); and

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comparing the determined magnitude with measured reference values to determine the stress/strain condition of the element (See col. 3, line 52 to col. 4, line 22).

Regarding claim 2, Dundas discloses the sensing device at least partially surrounds the element (See FIG. 1).

6       Regarding claim 3, Dundas discloses using a pulsed magnetizing current (See FIG. 2, item 17 and see col. 3, lines 12-51, note pulsed sawtooth waveform is used), the sensing device detects the noise during the off-time of the pulses (See entire disclosure, note that the sensing coil 19 continuously senses during repeated cycles of the exciting coil, thus would  
12   measure during both the on and off time periods).

Regarding claim 9, Dundas discloses passing a continuously increasing magnetizing current through an exciting device situated in proximity to said item (See FIGS. 1 and 2, note rising current 17 applied to coil 11).

18       Regarding claim 10, Dundas discloses determining strength of the magnetic field comprising measuring said magnetizing current at said time of commencement of Barkhausen noise (See FIGS. 3-5).

Regarding claim 11, Dundas discloses comparing measured magnetizing current with measured reference values for said item (See col. 3, line 52 to col. 4, line 22).

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***Allowable Subject Matter***

Claims 4-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base  
6 claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: regarding these claims, the prior art does not show or teach placing a non-magnetized or non-magnetic material between the element and a structure to which it is connected as recited in the claims and in combination with  
12 the other features of the claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US5280725, US5164669, US4466287 and US4279163 disclose varying stress  
18 detecting systems using magnetic means.

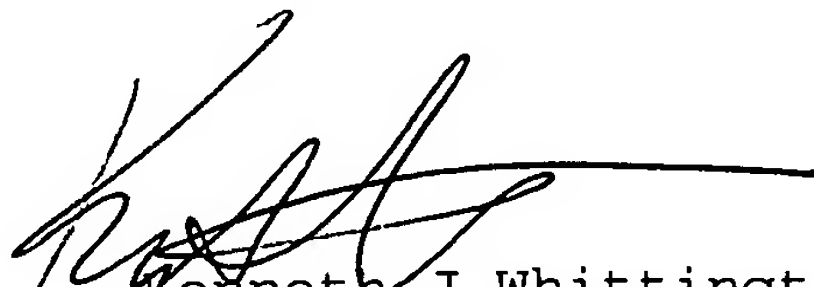
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth J. Whittington whose telephone number is (571) 272-2264. The examiner can normally be reached on Monday-Friday, 7:30am-4:00pm.

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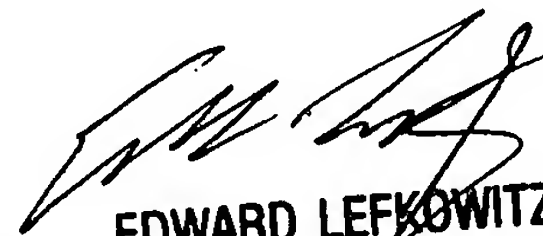
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

6 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, 12 see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Kenneth J Whittington  
Examiner  
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kjw

  
EDWARD LEFKOWITZ  
SUPERVISORY PATENT EXAMINER  
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